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Policy and Consequences: Lessons from New Jersey Health Care Reform

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Economic policy reform affecting New Jersey hospitals reduced the quality of heart attack care among blacks and the uninsured, and also increased mortality for congestive heart failure and stroke among the uninsured.

Context: Calls for containing the cost of health care continue despite two decades of market-based reforms designed to slow its rapid growth. While cost-cutting legislation in the early to mid-1990s had a profound effect on the organization, management, and finances of hospitals, prompting mergers and closings throughout the country, only recently have we begun to understand how these policy reforms affected the quality of care that patients received.

Background

In 1993 New Jersey enacted the Health Care Reform Act (HCRA), changing how the state's hospitals could set prices for services. New Jersey moved from a rate-setting system in which a state-run regulatory body uses incurred costs to calculate what hospitals could charge, to a system in which insurers negotiate prices with hospitals. At the same time, HCRA also reduced the state funding available for charity care by ending a surcharge applied to all New Jersey hospital bills that helped to compensate hospitals for treating uninsured patients.

Both measures increased the financial pressure on New Jersey hospitals and therefore had the potential to reduce the quality of care, particularly for vulnerable populations: the uninsured and racial minorities. The following research explores the effect of HCRA on the quality of hospital-provided health care in New Jersey.

Data

The research team used data from New Jersey and the comparison state, New York, from 1990-1996 to analyze how in-hospital mortality changed as a result of HCRA. They looked at patients with any of seven common conditions: hip fracture, stroke, acute myocardial infarction (heart attack), gastrointestinal bleeding, congestive heart failure (CHF), pneumonia and pulmonary embolism. Mortality rates for these conditions are good indicators of hospital quality. New York was chosen as a control to account for underlying and expected improvements in mortality rates over time.

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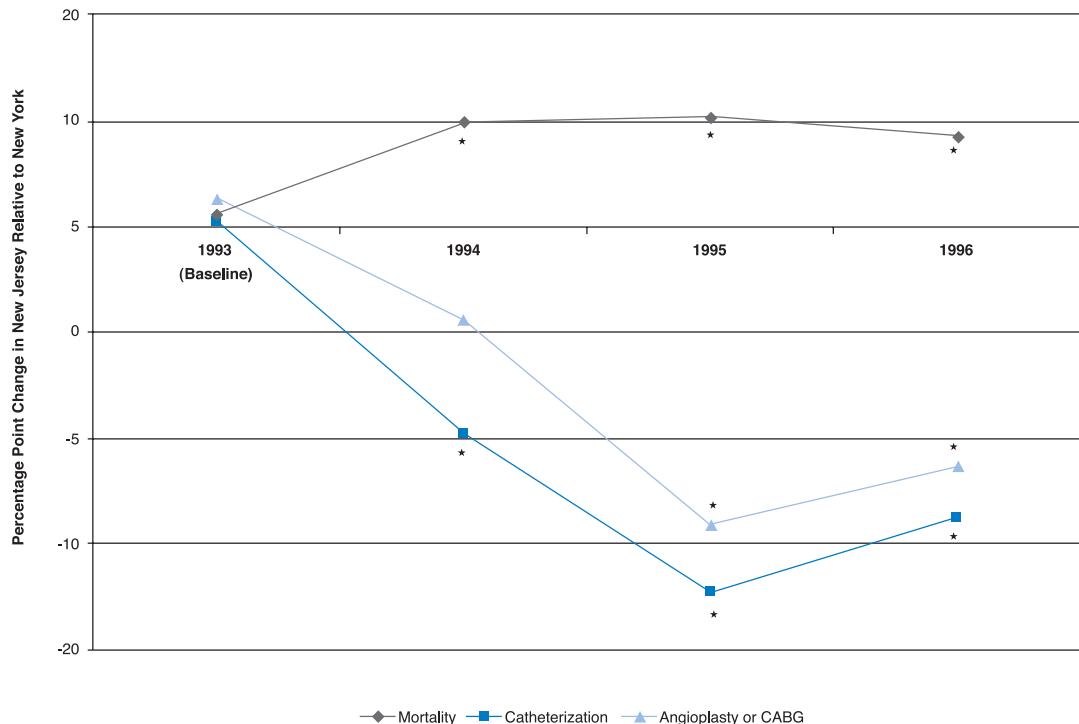
**For some conditions,
particularly heart
attack, HCRA
adversely affected the
uninsured in New
Jersey.**

**After HCRA,
uninsured heart
attack patients in
New Jersey received
fewer intensive and
expensive treatments
relative to their New
York counterparts.**

Impact on the Insured and Uninsured

- The research team examined 469,629 hospital discharges for hip fracture, stroke, gastrointestinal bleeding, CHF, pneumonia and pulmonary embolism. All patients were under 65 and not enrolled in Medicare. For heart attack, the team used discharges for all confirmed heart attack patients younger than 85 years old with complete records, including those enrolled in Medicare. There were 286,640 such patients.
- As expected, because the quality of medical care has been improving, overall mortality rates improved each year during study time period, although slightly less so in New Jersey.
- Following the institution of HCRA, uninsured patients in New Jersey with heart attack, CHF, and stroke experienced an increase in mortality compared to similar patients in New York. However, this effect was not found in patients with gastrointestinal bleeding, pneumonia, hip fracture, and pulmonary embolism.
- HCRA had the greatest impact on uninsured heart attack patients. Relative to similar patients in New York, the uninsured patients in New Jersey experienced a 41 to 57 percent increase in their heart attack mortality after HCRA.
- After HCRA, uninsured heart attack patients experienced a relative drop in their rates of procedures such as catheterization and revascularization (angioplasty or coronary artery bypass grafting), two procedures commonly used to treat heart attack.
- Among insured patients, there were no significant differences in the rate of change in mortality or procedure utilization among patients in New Jersey relative to New York.

Figure 1. Risk-Adjusted Impact on Uninsured Heart Attack Patients in New Jersey Post-HCRA: Mortality Increased as the Rate of Intensive Treatment Declined



* indicates statistical significance ($p < .001$)

- In regions of New Jersey with more intensive competition between hospitals—that is, regions where hospitals presumably faced greater pressure on prices—mortality among insured patients worsened to a greater degree relative to New York than in less competitive regions of the state by about 0.5 percentage points. These findings lend further support to the view that financial pressures were the cause of the decline in health care quality.

Impact on Racial Health Disparities

- The team assembled a data set of 1,357,394 patient discharges from New York and New Jersey who met similar criteria as in the above study but included Medicare patients. They then compared the change in risk-adjusted mortality rates from before HCRA (1990-1992) to after HCRA (1994-1996) between the two states.
- Overall, for all seven study conditions, black patients in New Jersey appeared to fare worse than white patients following HCRA, but these findings were not statistically significant.
- However, the effects were large and statistically significant for heart attack. Black patients treated for heart attack in New Jersey had a 2.4 percent greater relative increase in mortality after HCRA compared to patients in New York over the same time period, and white patients had a 0.1 percent greater relative increase.

Implications

These studies suggest that the health policies put in place in New Jersey to reduce costs also reduced the quality of care for selected conditions, particularly heart attack. Moreover, these results suggest that these health policies disproportionately hurt black patients and the uninsured. Sometimes economic policies can have unintended and potentially fatal clinical consequences.

Although these studies cannot demonstrate cause-and-effect relationships conclusively, they are concerning. They are all the more concerning because the relative increases in mortality revealed here may reflect only part of the decrement in quality. Had the investigators been able to measure quality of life and other subtler outcomes, it is possible that they would have observed even more differences after HCRA.

While market based reforms designed solely to cut costs can have a disproportionate and negative effect on the most vulnerable health care consumers and those who receive care in highly competitive markets, cost containment remains important. And other research suggests that at times reductions in cost are associated with increases in quality, rather than decreases. Taken together, these findings remind us that the pursuit of cost containment must always be undertaken with a careful eye not just to economic outcomes, but also to clinical outcomes. Furthermore, we must evaluate not just overall average clinical outcomes, but also how those outcomes are distributed across subpopulations, particularly society's most vulnerable.

Insured patients hospitalized in more competitive hospital markets fared worse under HCRA than those who received their care in less competitive areas.

HCRA increased racial disparities for heart attack, but not for other conditions.

This issue of the CHERP Policy Brief is based on the following publications: 1) Volpp KG, Epstein AJ, Williams SV. *The effect of market reform on racial differences in hospital mortality*. J Gen Intern Med. 2006 Nov; 21(11):1198-202 and erratum in 2006 Dec; 21(12):1360; accompanying editorial by Saha S. *The inherent inequities of market-based health care reform*. J Gen Intern Med. 2006 Nov; 21(11):1211-2.; 2) Volpp KG, Ketcham JD, Epstein AJ, Williams SV. *The effects of price competition and reduced subsidies for uncompensated care on hospital mortality*. Health Serv Res. 2005 Aug; 40(4):1056-77.; and 3) Volpp KG, Williams SV, Waldfogel J, Silber JH, Schwartz JS, Pauly MV. *Market reform in New Jersey and the effect on mortality from acute myocardial infarction*. Health Serv Res. 2003 Apr; 38(2):515-33.

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